

MODIFICATION INSTRUCTIONS

for the

KODAK MULTILOADER 700

Service Code 3053

Modification No. 9

Type 1 selective

Purpose:

To remove and prevent corrosion in the ML 700 and the TUNNEL

SERIAL NUMBERS: Up to SN 1245 for 50 Hz units.

Up to SN 5106 for 60 Hz units.

INSTALLATION TIME: Approx. 12 hours for severe corroded units. Down time of unit: approx. 72 hours

SPECIAL TOOLS: OPENER GAUGE 9193386

PARTS REQUIREMENTS: See parts list.

PLEASE NOTE

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PARTS LIST

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
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9192905..... Mod Kit No. 9 includes:

4281636	SCREW	1
4281751	SCREW	4
4281931	THREAD PIN	1
4282011	SCREW	4
4282691	SCREW	2
4282692	SCREW	8
4282746	SCREW	2
4283111	SCREW	2
4282781	SCREW	2
4470106	WASHER	24
4480091	WASHER	2
4480166	WASHER	14
4480176	WASHER	6
4480271	WASHER	9
4480556	WASHER	4
4480037	WASHER	3
4500456	CIRCLIP	2
4500526	CIRCLIP	32
4780031	PIN	2
4853036	NUT	8
4853126	NUT	3
4853136	NUT	5
4853141	NUT	2
4853246	NUT	14
4853251	NUT	2
5001329	GLOVES	1
5001522	FOAM RUBBER	1
5574816	EMERY PAPER	2
5578311	PAINT BRUSH	1
5578316	PAINT BRUSH.....	1
5578357	PAINT BRUSH.....	1
5593933	PLASTIC BAG	1
5631285	COTTON CLOTH	3
5631369	ADHESIVE TAPE	1
6081850	CABLE TIES	25
9183526	PLUG	2
9185301	SHELL	1
9185311	STOP BRACKET	2
9185371	BEARING	2
9185736	HOSE	1
9185561	BEARING	1
9185611	BEARING SHAFT	1
9185776	SHAFT	1
9185831	BEARING	4

PART NO.	DESCRIPTION	QUANTITY
9185991	SPACER PLATE	1
9187571	ROD	1
9188261	ROD	1
9191591	SUCKER BAR CAM	2
4279346	SCREW	2
4500441	TOOTHED WASHER	2
.....	PLASTIC COVER	1
.....	ESKAPON S115	1
.....	ANTICORIT BW366	1

REPLACEMENT OF CORRODED PARTS

1. Switch off ML 700
2. Disconnect ML 700 from TUNNEL.
3. Remove TOP COVER

Note:

All standard parts in this Mod Kit are made out of stainless steel. Aluminum parts are coated for protection against corrosion. Only most of the BEARINGS are made out of the same material as before therefore they should only be replaced if they are corroded.

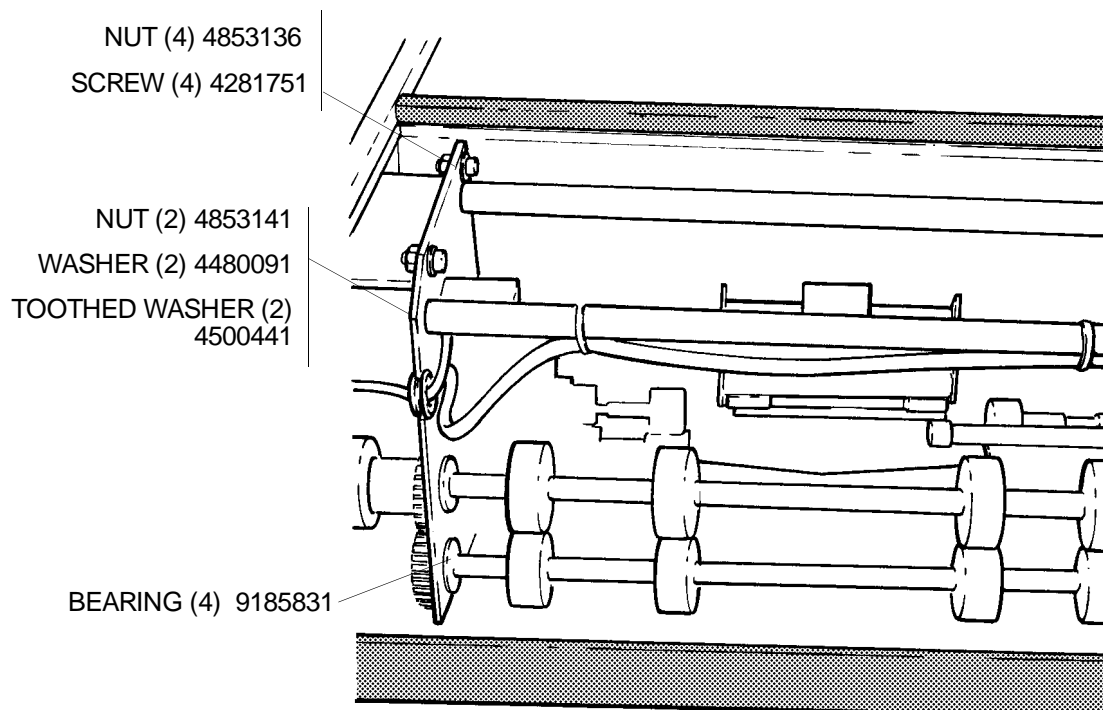


figure 1

4. Remove and discard one SCREW 4281751 with NUT 4853136 and WASHERS 4480271 install new SCREW 4281751 with NUT 4853136 and WASHERS 4480271.

Caution:

Do not loosen more than one SCREW at one time! It will be impossible to readjust the CONVEYOR.

- 5.** Repeat step 4 until all 4 SCREWS 4281751, all 4 NUTS 4853136 and all 8 WASHERS 4480271 are exchanged.
- 6.** Remove BEARINGS and install new BEARINGS 9185831. Do this only if BEARINGS are corroded.
- 7.** Remove NUTS 4853141 with WASHERS 4480091 and TOOTHED WASHERS 4500441.

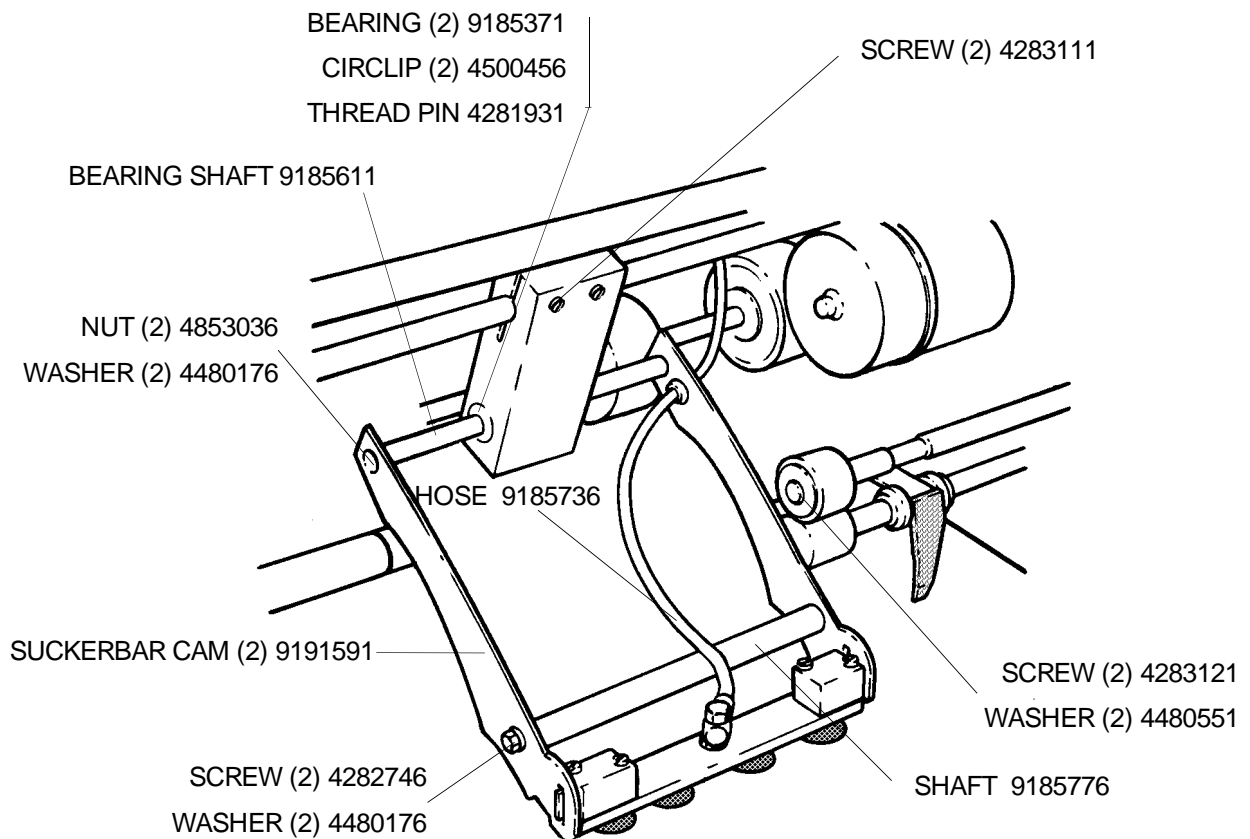


figure 2

- 8.** Remove and discard one SCREW 4283111 install and tighten new SCREW 428311.

Note:

Do not loosen both SCREWS 4283111 at the same time.

9. Remove and discard the other SCREW 4283111 install new SCREW 4283111 .

10. Remove and discard indicated parts on figure 2. Install new parts.

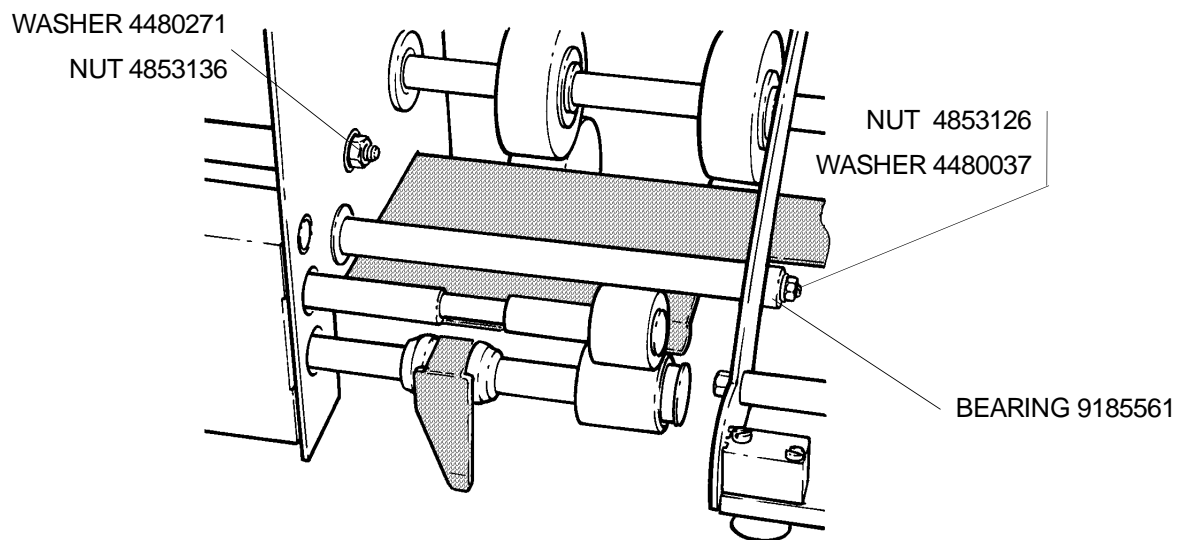


figure 3

11. Remove and discard indicated parts on figure 3. Install new parts.

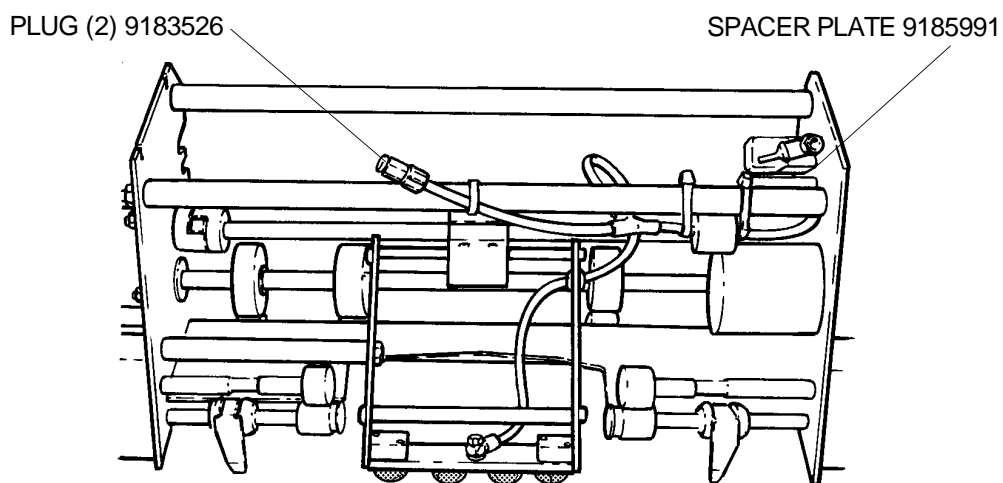


figure 4

12. Remove indicated parts on figure 4. Install new parts.

13. Remove and discard all CIRCLIPS. (They have no function.). See figure 5.

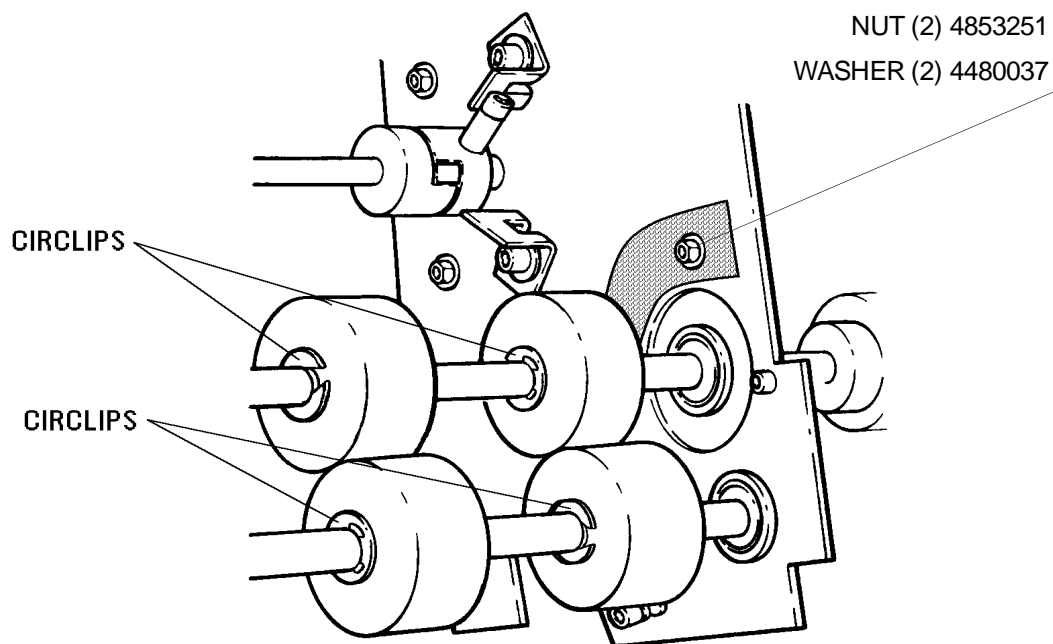


figure 5

14. Remove 2 NUTS and 2 WASHERS and install NUTS 4853251 and WASHERS 4480037.

- 15.** Mark the position of STOP BRACKETS. Remove and discard indicated parts on figure 6. Install new parts.

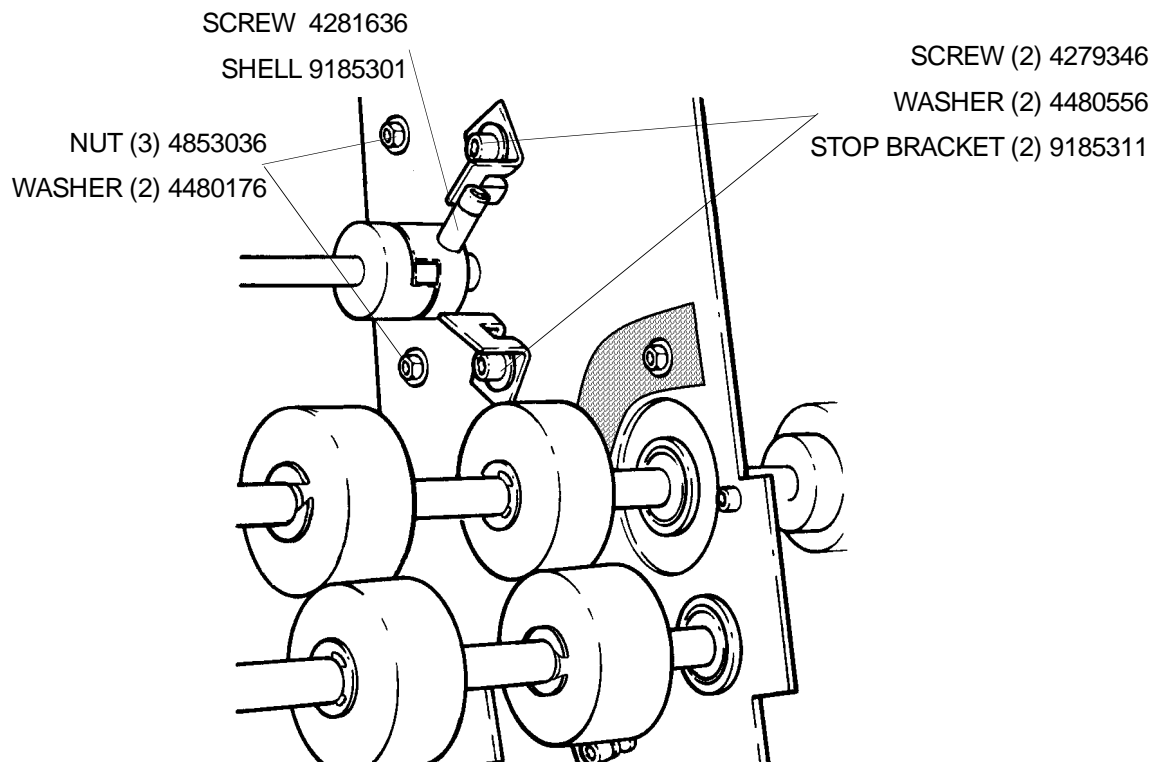


figure 6

- 16.** Remove indicated parts on figure 7. Install new parts. See Note on page 10!

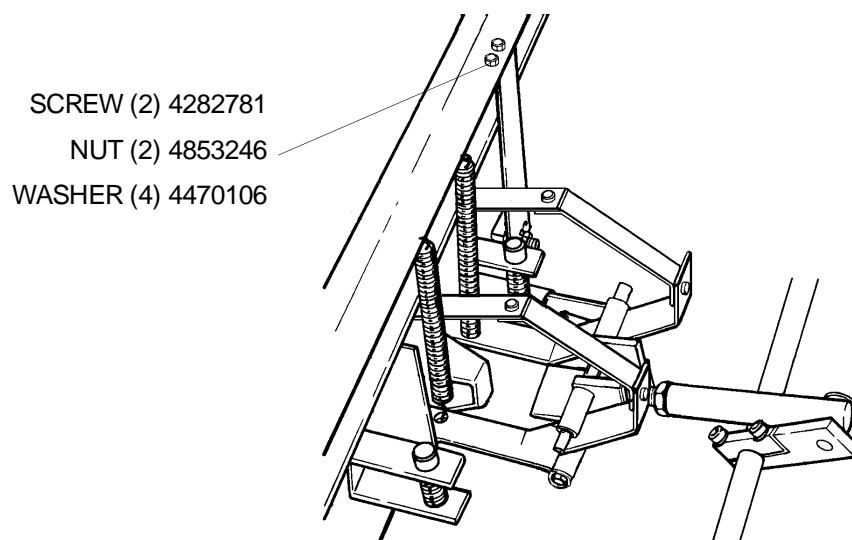


figure 7

Note:

Do not loosen both SCREWS at the same time to prevent the MOUNTING BRACKET for the SENSOR B6 (FOC) from altering.

17. Remove indicated part in figure 8. Install new parts.

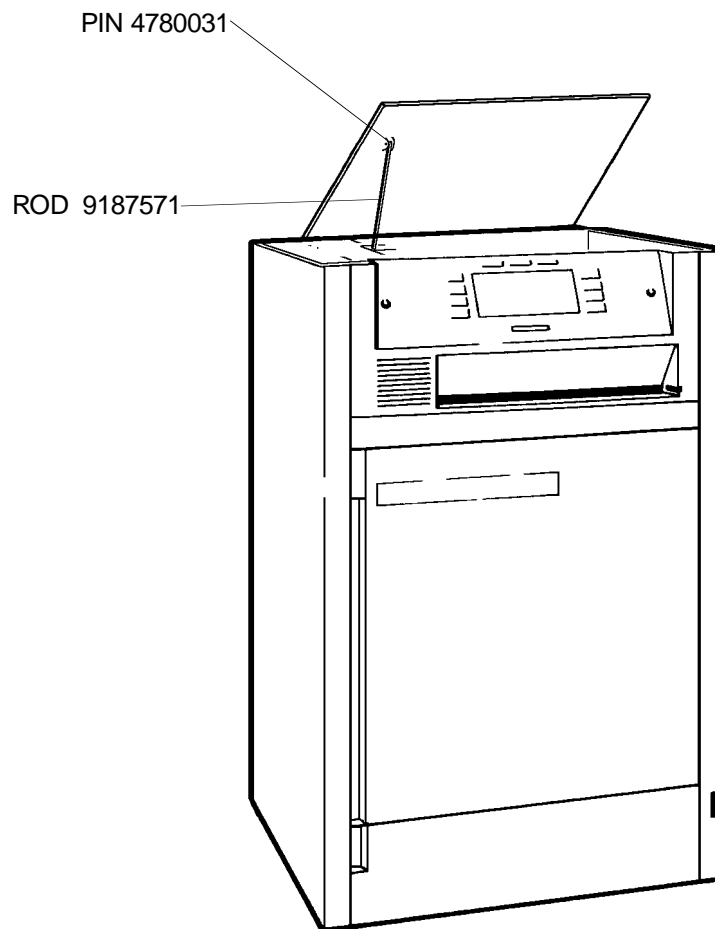


figure 8

18. Remove and discard parts indicated in figure 9. Install new parts.

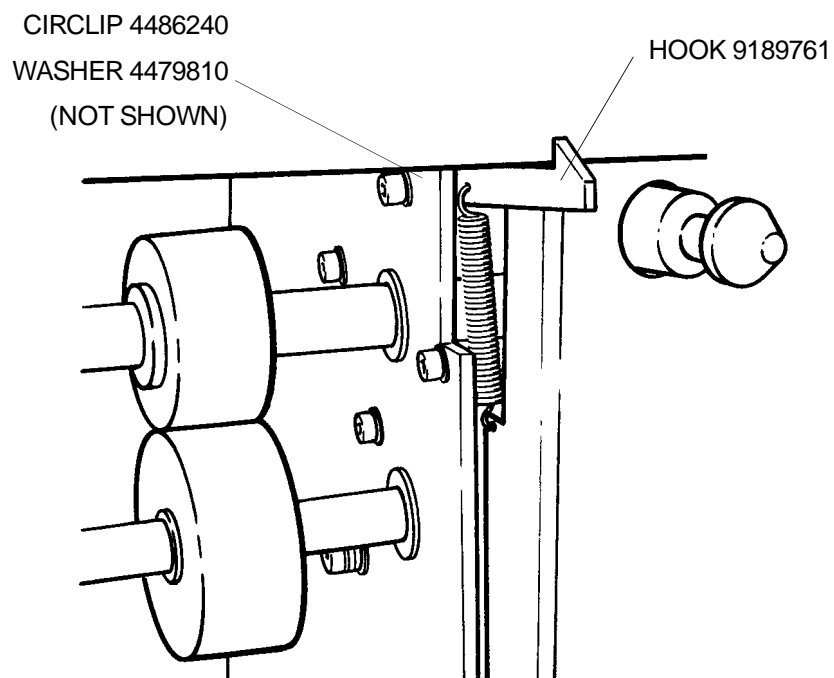


figure 9

19. Remove CONVEYOR from TUNNEL. See figure 10.

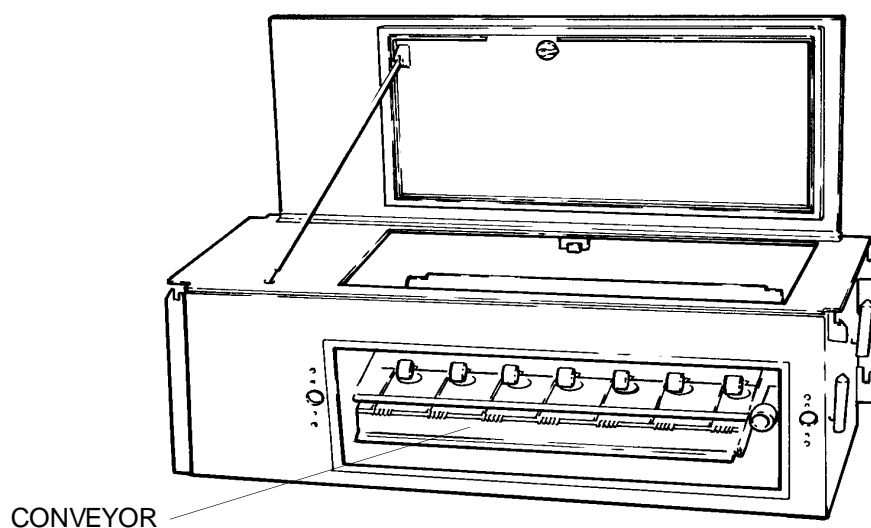


figure 10

20. Remove PIN with ROD. Install new PIN 4780031 and ROD 9188261.

21. Mark position of INTERLOCK SWITCH S20. Replace indicated parts on INTERLOCK SWITCH S20.

Note:

Do not loosen both SCREWS at the same time.

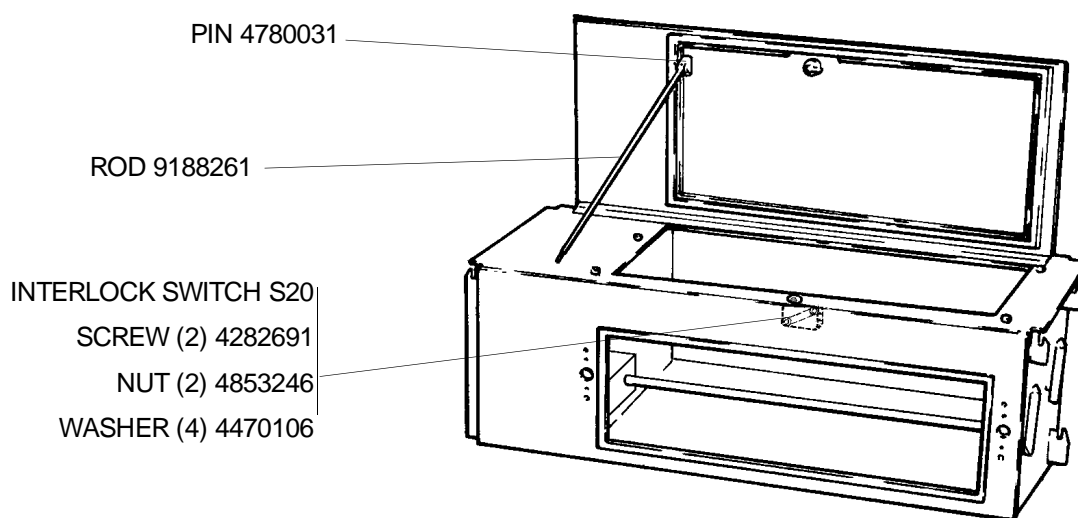


figure 11

22. Measure and record the adjusted length of SCREWS. Remove and discard SCREWS and NUTS. Install SCREWS 4282011 with NUT 4853036 to the recorded length. See figure 12.

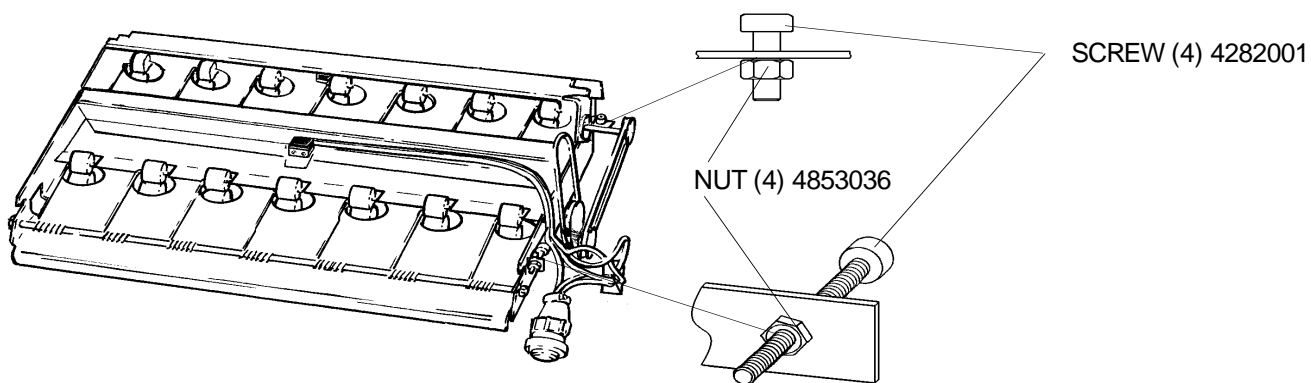


figure 12

- 23.** Mark the position of SENSORS. Remove and discard SCREWS, WASHERS and NUTS on SENSORS. Install new SCREWS 4282692, WASHERS 4470106 and NUTS 4853246 on the SENSORS.

Note:

Do not loosen both SCREWS on SENSOR at the same time for to keep misadjustments to a minimum.

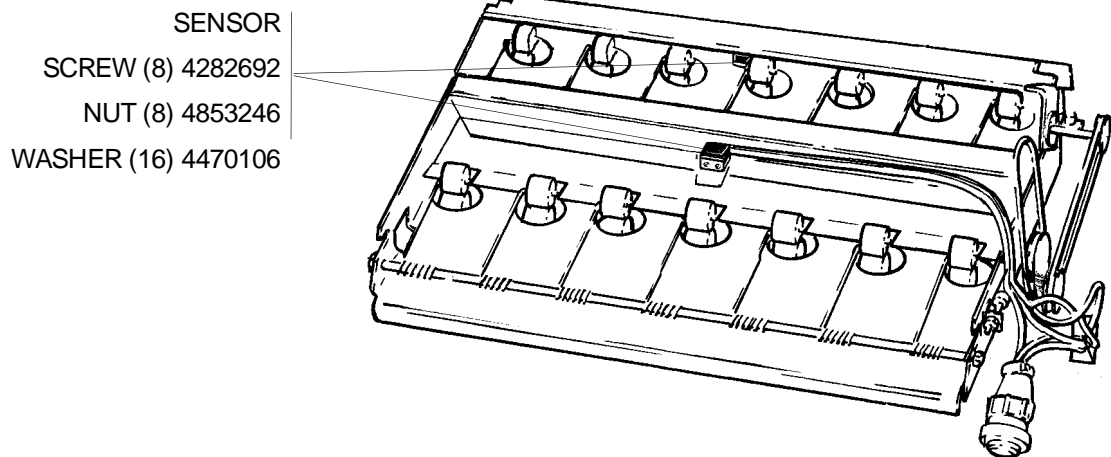


figure 13

- 24.** Remove both SHAFTS with ROLLERS. See figure 14.

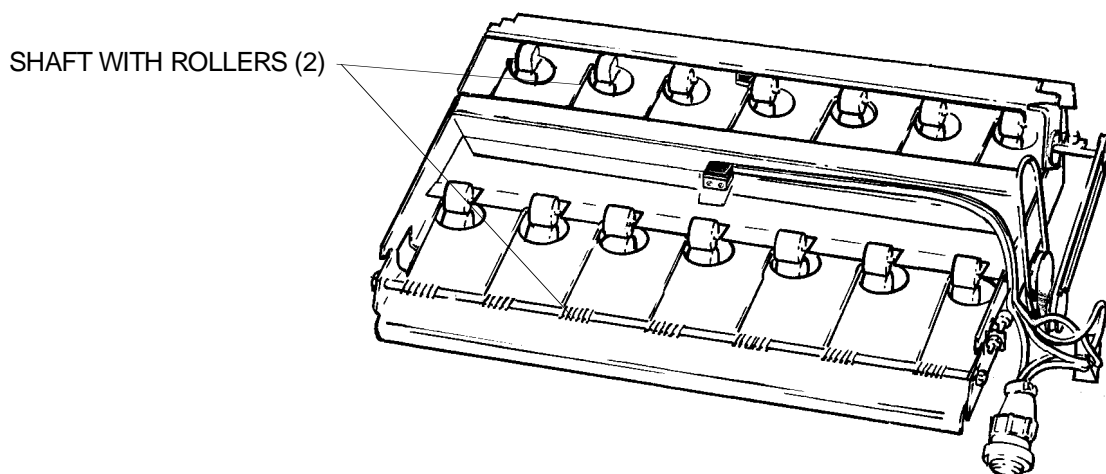


figure 14

25. Remove and discard part indicated in figure 15. Install new parts.

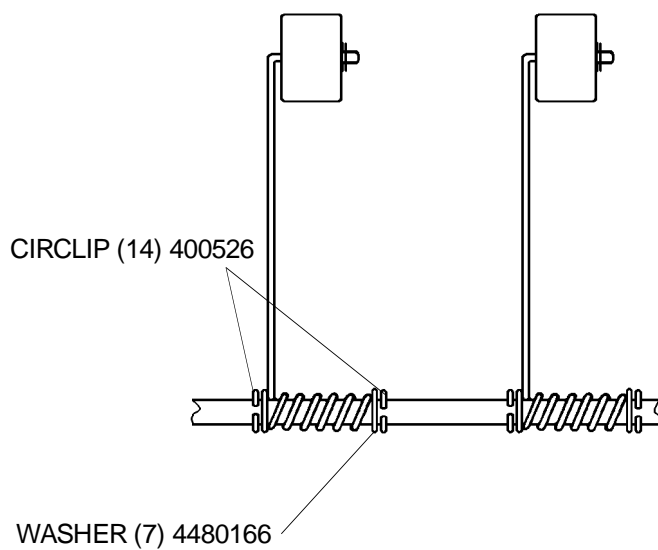


figure 15

26. Install SHAFTS WITH ROLLERS using new HARDWARE. See figure 16.

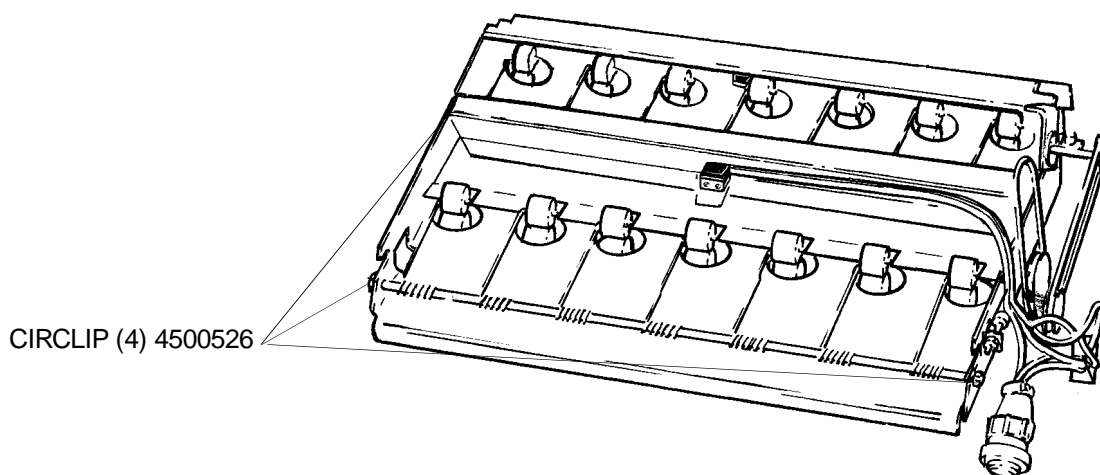


figure 16

- 27.** Remove CABLE TIES. Look for corroded parts in the CONVEYOR. Remove corrosion with EMERY PAPER.

Caution:

Cover SLIDING PLATES, ROLLERS, FILM POCKET and PCB's to avoid contamination with rust debris when you remove corrosion with EMERY PAPER. Remove all rust debris from ML 700.

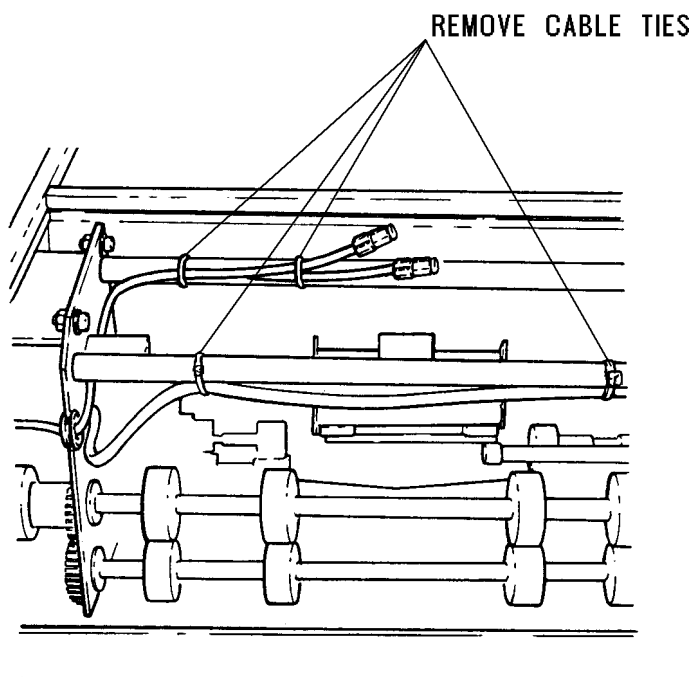


figure 17

- 28.** Look for corroded parts in TUNNEL. Remove corrosion with EMERY PAPER.

Take the followings **SAFETY PRECAUTIONS** when using **CLEANER ESKAPON S115** and **ANTICORIT BW366**:

Before starting with the next steps make sure that there is a good ventilation in the room. Do not smoke. Do not touch ESKAPON S115 with hands, wear gloves. Do not eat or drink during work. Do not discard the chemicals into the drain.

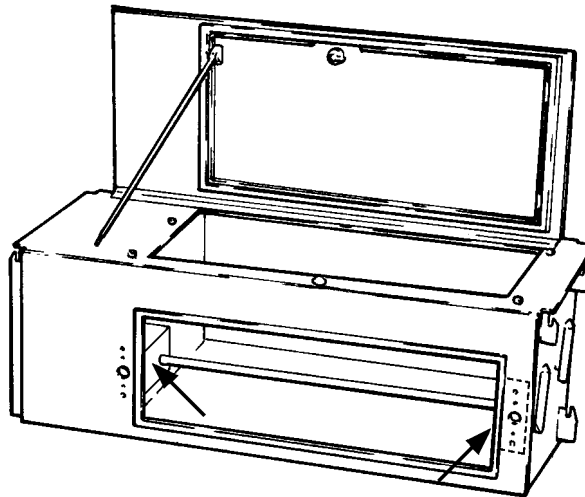


figure 18

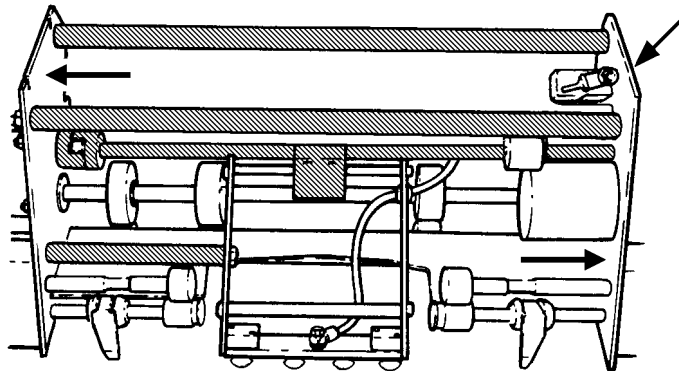


figure 19

29. Clean the indicated and dashed parts in figure 18 and 19 with a cloth of cotton wetted with ESKAPON S115.

30. Clean all parts where corrosion is removed with a cloth of cotton wetted with ESKAPON S115. TO AVOID CONTAMINATION WITH PAINT COVER DASHED PARTS WITH PLASTIC COVER ENCLOSED

31 . Paint the parts cleaned in step 29 and step 30 with ANTICORIT BW366. Cover critical parts.

TO AVOID CONTAMINATION WITH PAINT
COVER DASHED PARTS WITH PLASTIC COVER
ENCLOSED

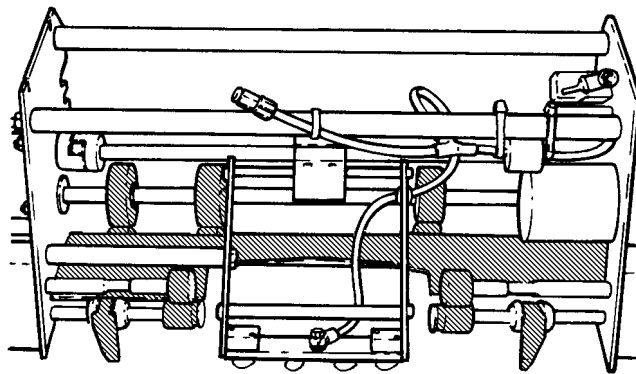


figure 20

32 . Let parts treated with ANTICORIT BW366 dry for 36 hours.

33. Install CONVEYOR in TUNNEL.

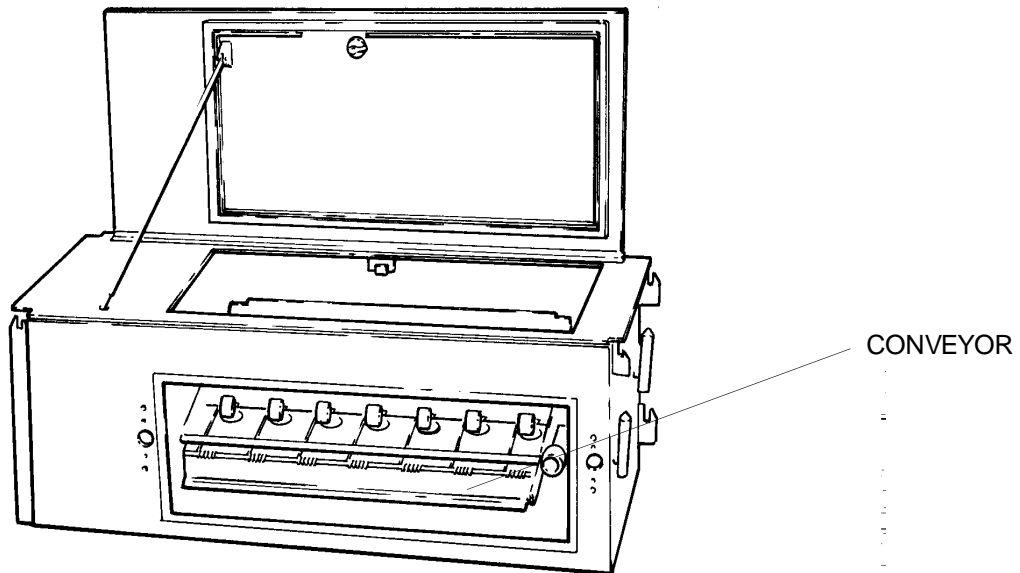


figure 21

34. Install CABLE TIES.

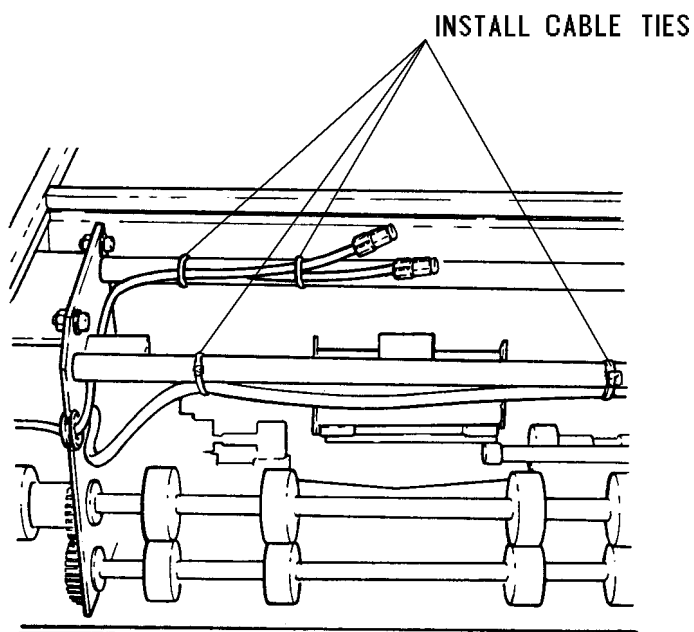


figure 22

35. Remove plastic COVERS.

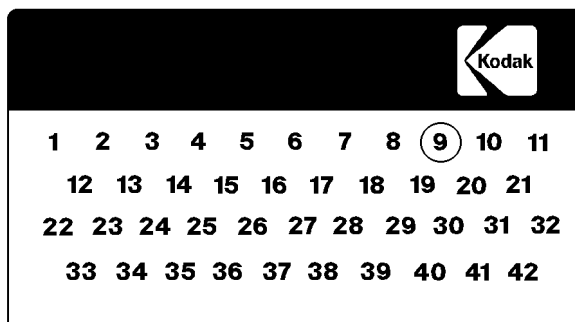


figure 23

36. Circle No. 9 on Mod Label of ML 700 and TUNNEL.

37. Install all COVERS.

38. Connect ML700 to TUNNEL.

2. ADJUSTMENTS

Note:

These adjustments have to be performed only if they were altered during installation of this Modification.

2.1 Adjustment SENSOR B6 (FILM OUT OF CASSETTE)

- 1.** Loosen NUTS.

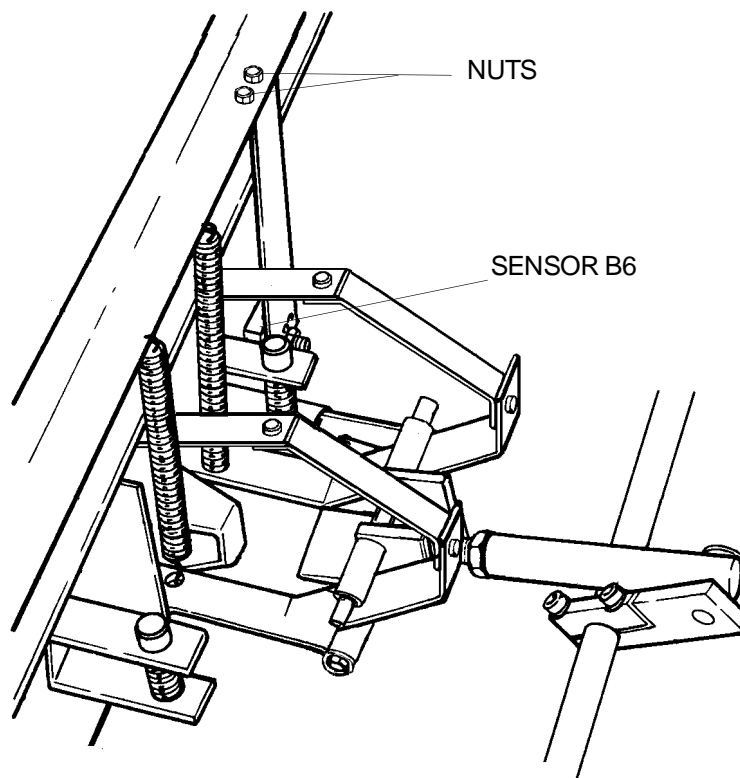


figure 24

- 2.** Connect positive lead of DVM to pin 11 of U1 on PCB A9. Connect negative lead of DVM to TP2 on PCB A9. 3. Adjust mechanical position of SENSOR B6 to a Voltage reading below or equal 0.7 V. Fasten SCREWS.

2.2 Adjustment of SENSOR B7 (TUNNEL SENSOR REAR)

1. Loosen SCREWS on SENSOR B7.

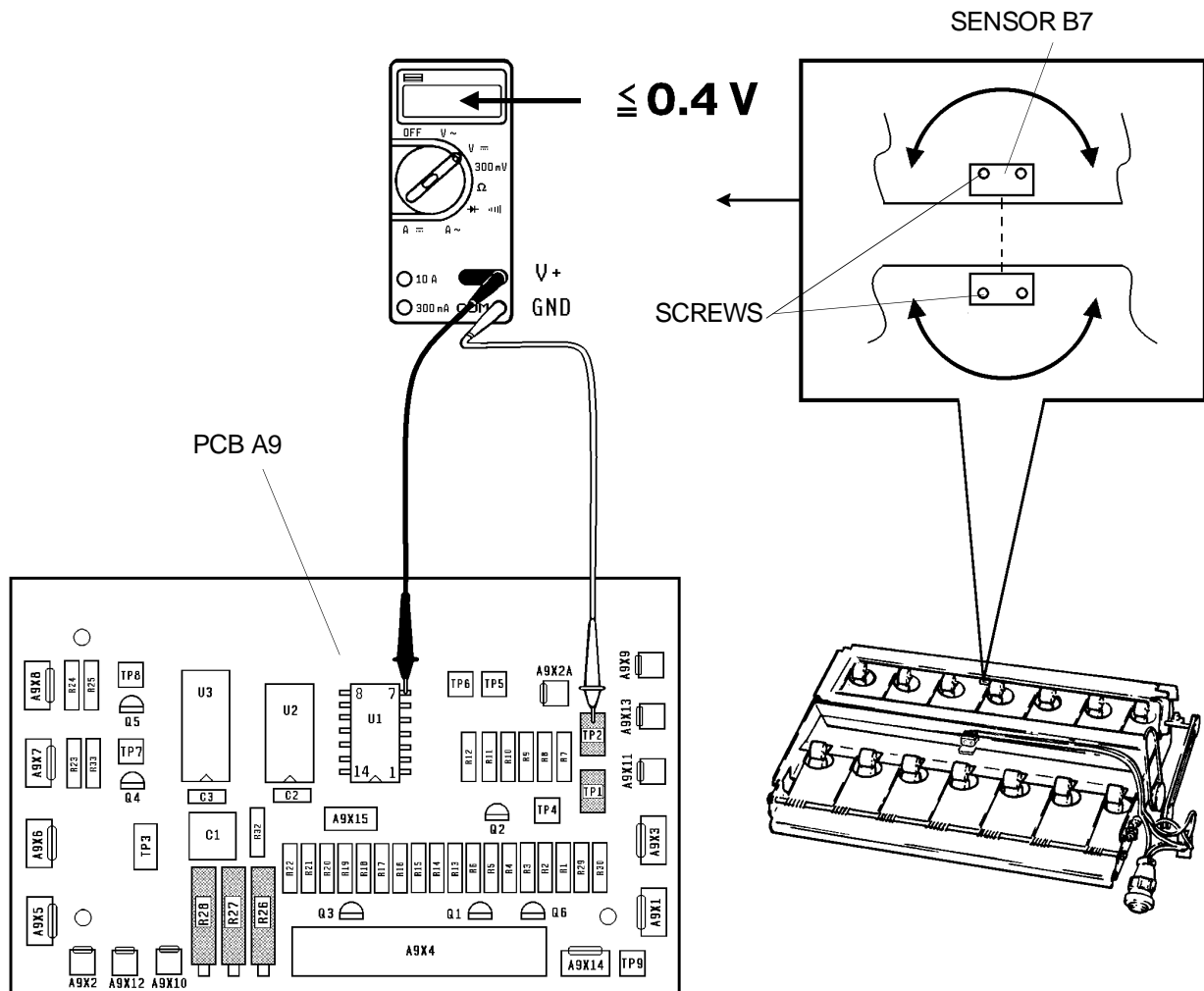


figure 25

2. Connect positive lead of DVM to pin 7 of U1. Connect negative lead of DVM to TP2 on PCB A9. 3. Adjust mechanical position of SENSOR B7 until the voltage reading on the DVM is below or equal 0.4 V. Fasten SCREWS on SENSOR.

2.3 Adjustment of SENSOR B8 (TUNNEL SENSOR FRONT)

1. Loosen SCREWS on SENSOR B8.

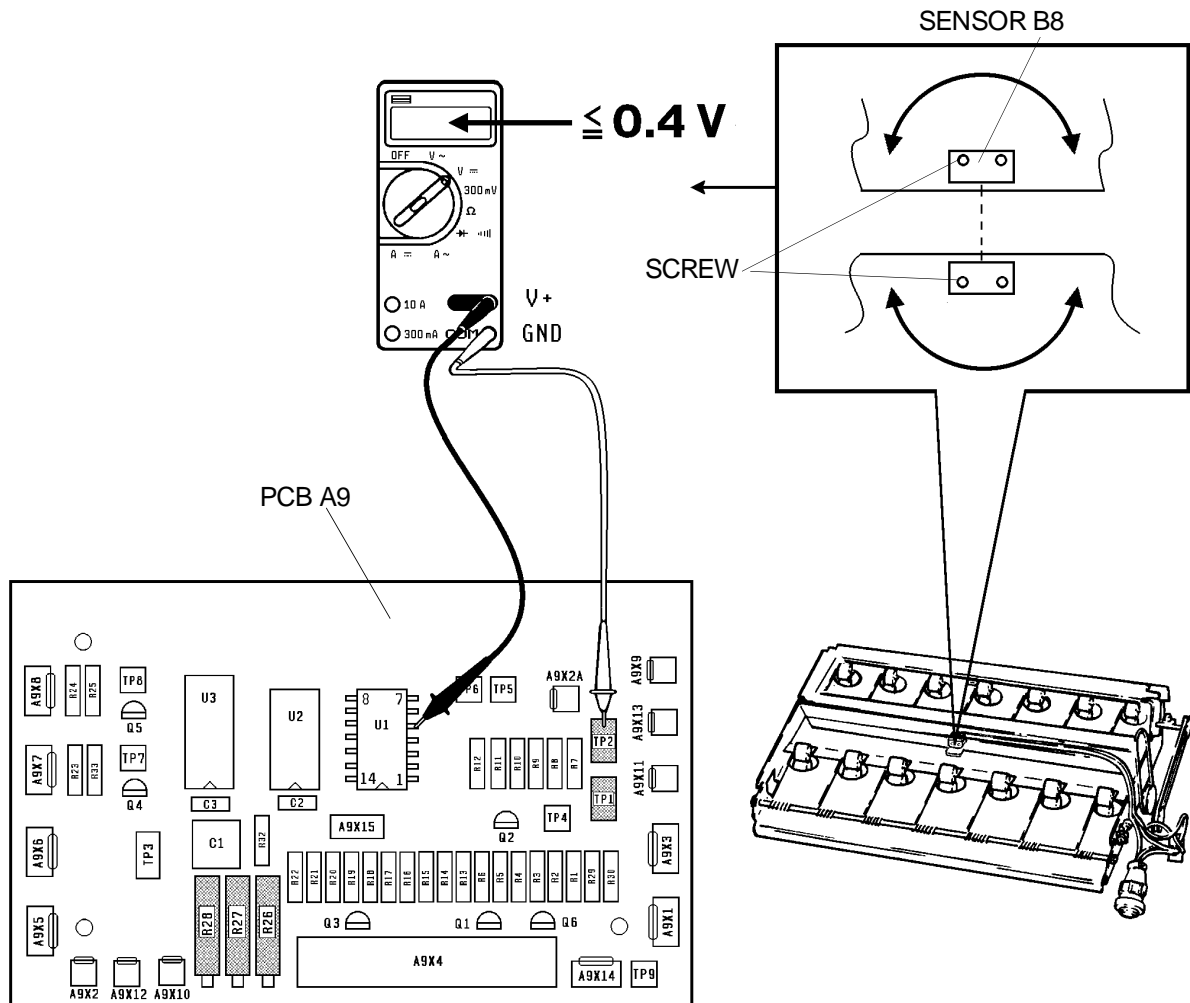


figure 26

2. Connect positive lead of DVM to pin 5 of U1 on PCB A9. Connect negative lead of DVM to TP2 on PCB A9.
3. Adjust the mechanical position of SENSOR B8 to a voltage reading on the DVM below or equal 0.4 V. Fasten SCREWS on SENSOR B8.

2.4 Adjustment of CASSETTE SUCKER BAR.

Note:

SUCKER BAR has to be parallel to the CASSETTE TRANSPORT BELT !

- 1.** Open TOP COVER.
- 2.** Enter TEST MODE.
- 3.** Key in 3, 1, 8 (OPEN CASSETTE)
- 4.** Move OPENER GAUGE 9193386 to the CASSETTE STOP.

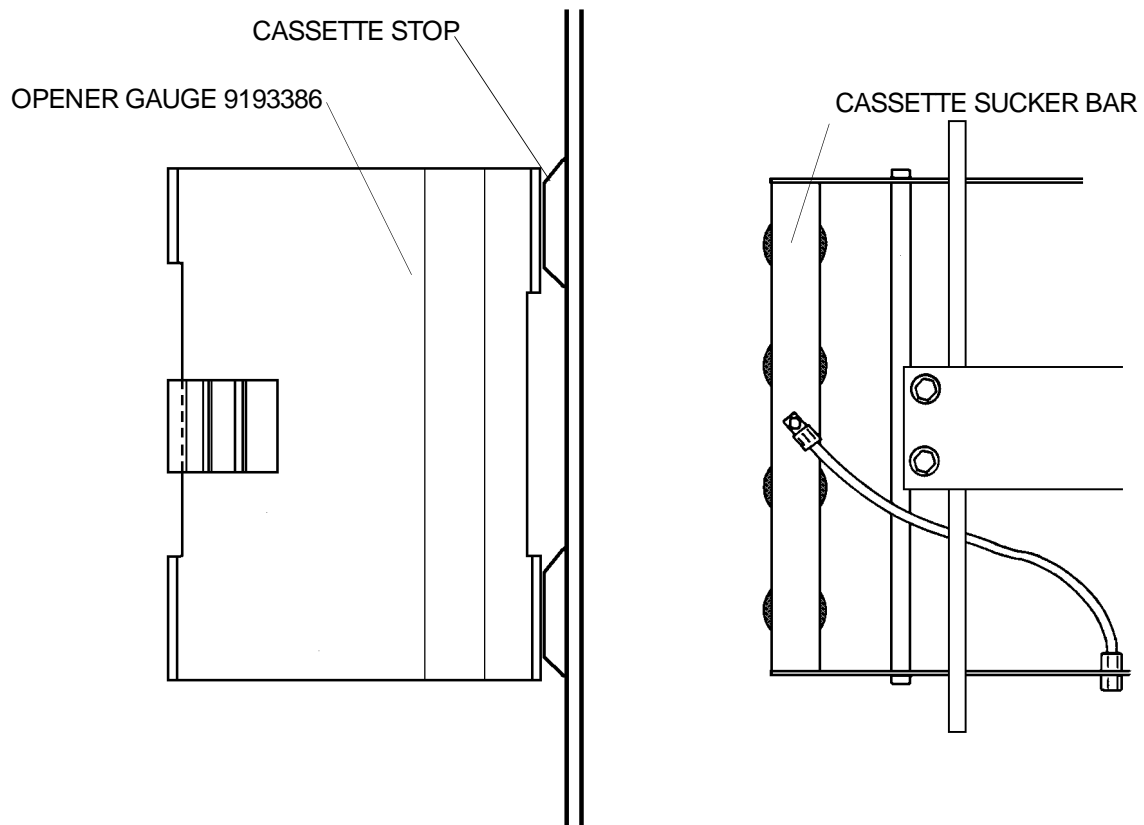


figure 27

5. Move CASSETTE SUCKER BAR by hand on OPENER GAUGE 9193386 to a clearance of approx. 2.5 mm between SUCKER BAR MOUNTS and the cutout of the SUCKER BAR CAMS. If necessary loosen STOP 1.

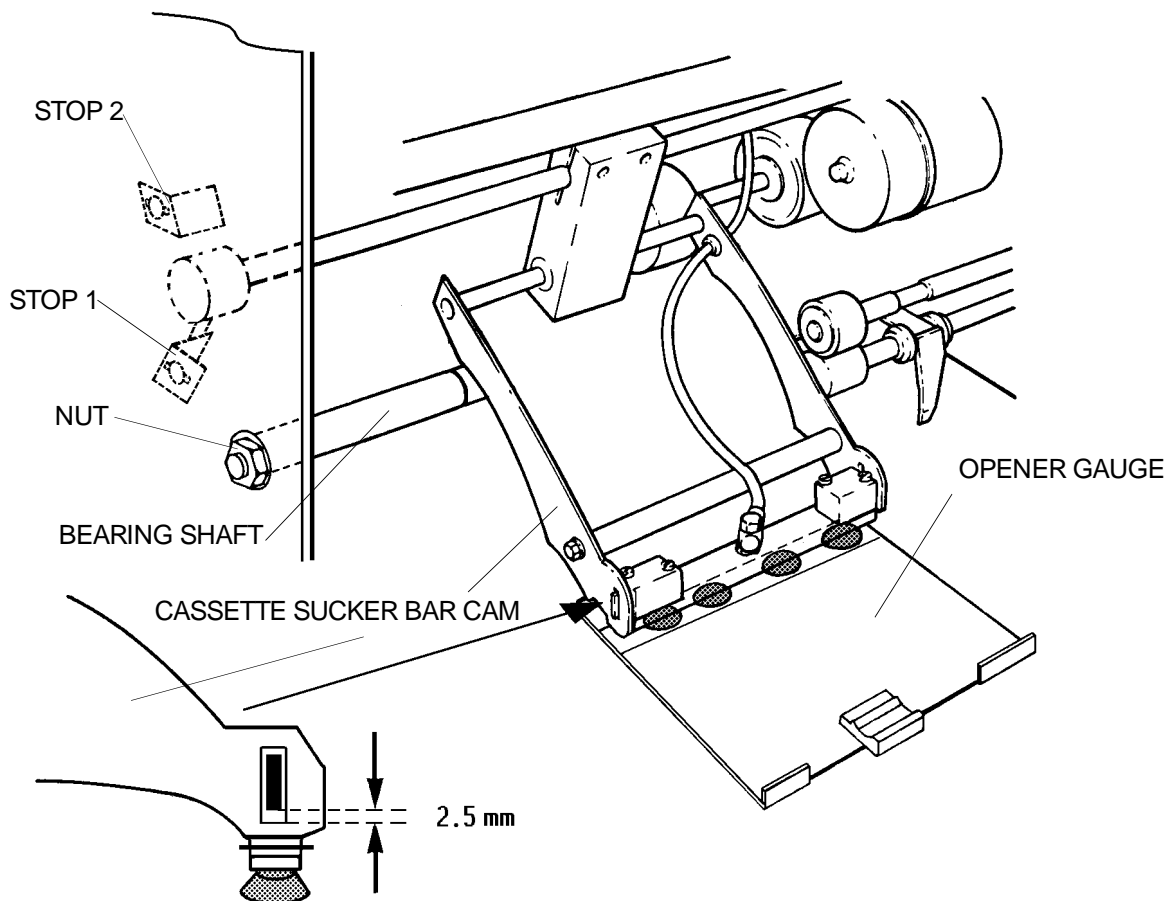


figure 28

6. Check that the SUCKERS are located between the two lines on OPENER GAUGE and that OPENER GAUGE rests tightly at the CASSETTE STOP. If position of CASSETTE SUCKER BAR is not correct loosen SCREW on BEARING SHAFT and adjust BEARING SHAFT. Check this adjustment by moving CASSETTE SUCKER BAR in and out.

Note:

The CASSETTE SUCKER BAR CAMS must not hit OPENER GAUGE or FRAME of ML 700. It may ride only on BEARING of BEARING SHAFT.

7. Move the CASSETTE SUCKER BAR out by MOTOR: Press keys 8, 4, 2 (Option 7.4 "CASSETTE SUCKER BAR BACK").
8. The DRIVE SHAFT should be stopped at a clearance of approx. 3 mm between CASSETTE SUCKER BAR CAMS and DRIVE SHAFT.

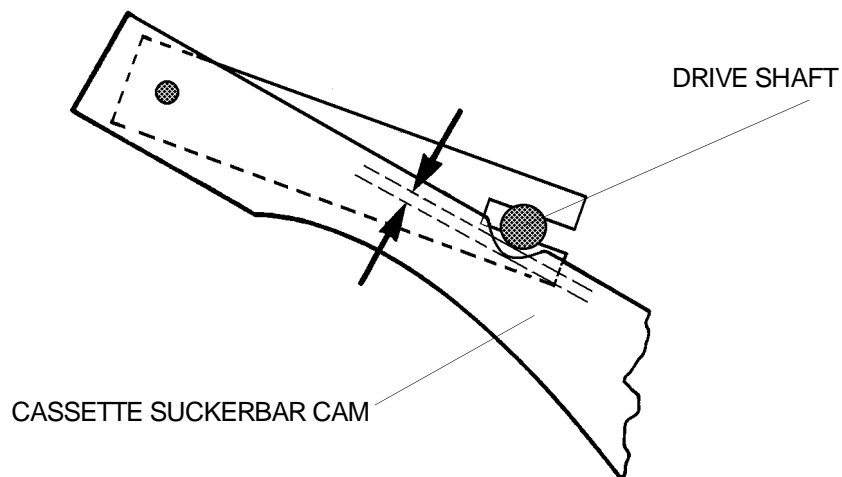


figure 29

9. If the BACK position of CASSETTE SUCKER BAR is not correct adjust SWITCH S12 (CSO). See figure 30.

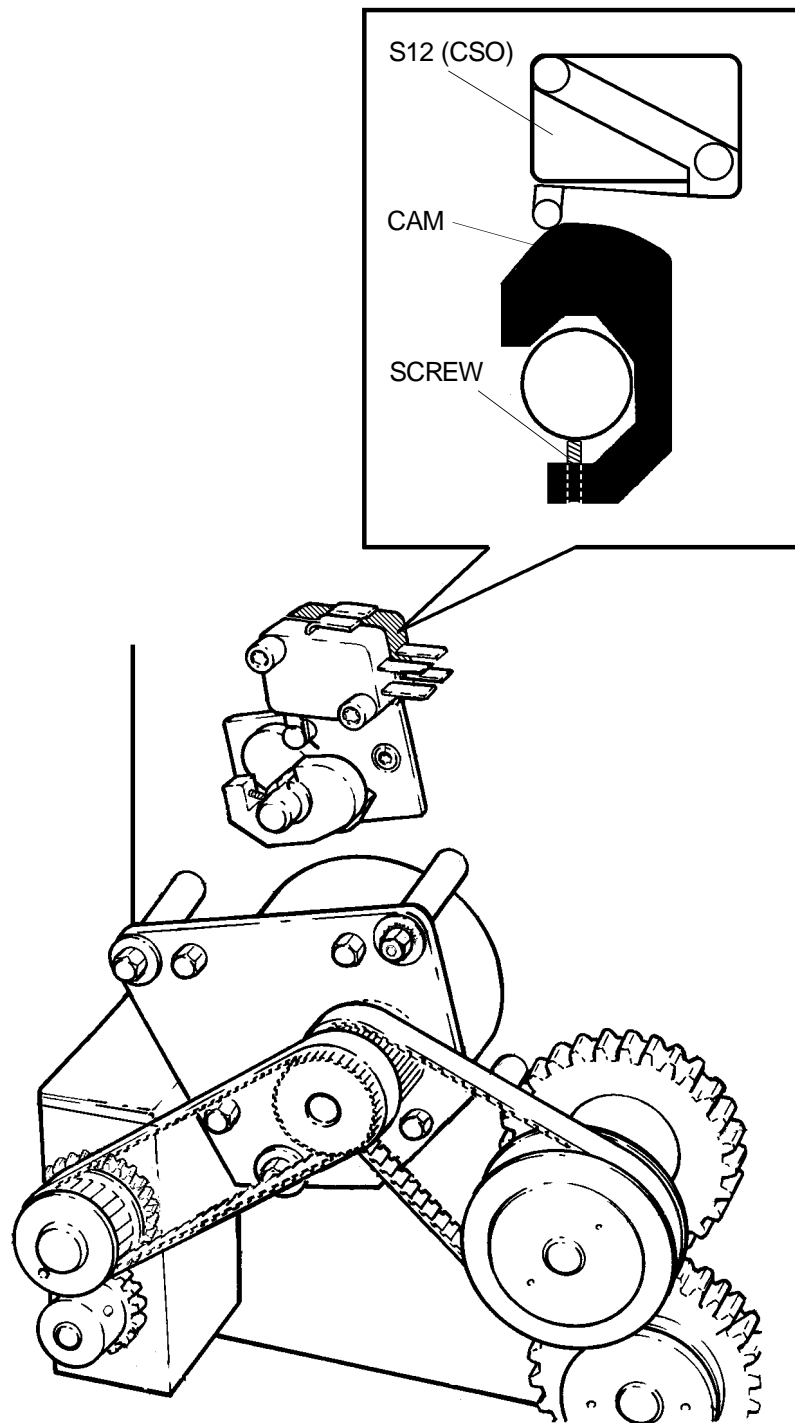


figure 30

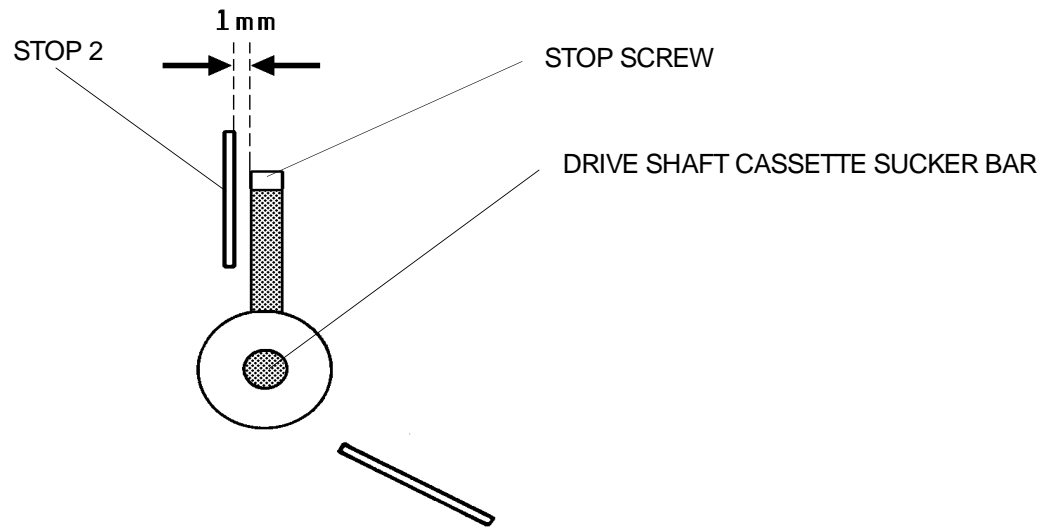


figure 31

- 10.** When SWITCH S12 (CSO) has actuated there should be a clearance of 1 mm between STOP SCREW and STOP 2. If necessary adjust STOP 2.
- 11.** Move CASSETTE SUCKER BAR in TAKE position: Press key 1.
- 12.** The CASSETTE SUCKER BAR has to be placed on OPENER GAUGE 9193386 as shown on figure 29.
- 13.** If the TAKE position of the CASSETTE SUCKER BAR is not correct perform the adjustments beginning on page 29.

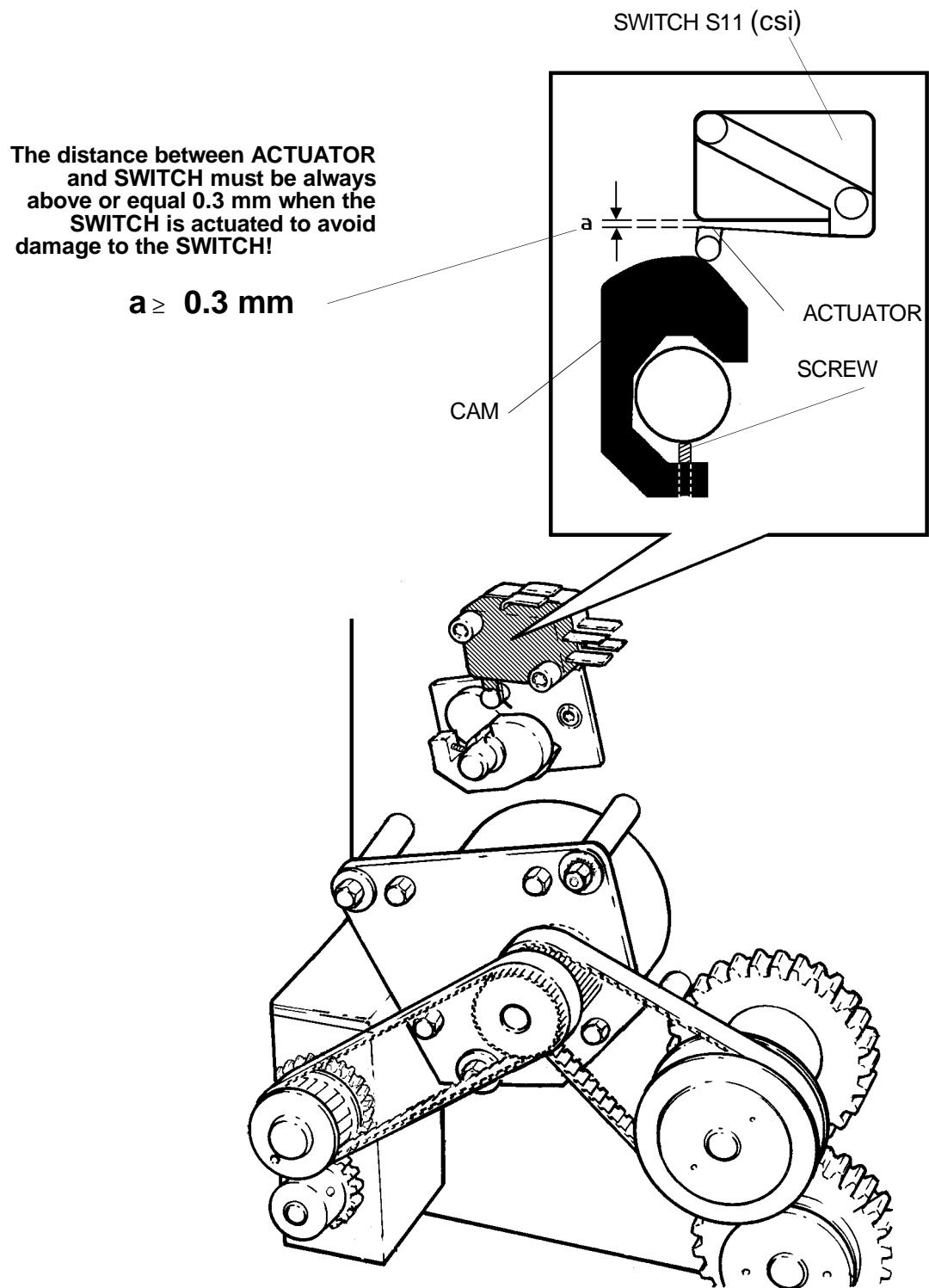


figure 32

If SOFTWARE version 2.14 is installed:

- 13.1.** Adjust SWITCH S11 to actuate, when CASSETTE SUCKER BAR is in the correct position. Continue with step 14.

If SOFTWARE Version 3.1 is installed:

- 13.1.** Move the CASSETTE SUCKER BAR on OPENER GAUGE 9193386 as shown on figure 28 by turning the DRIVE SHAFT by hand. If necessary loosen STOP 1.

- 13.2.** Key in 5 (CASSETTE SUCKER BAR BACK 100 MS USW).

- 13.3.** Adjust CAM for SWITCH S11 (CSI) that SWITCH S11 (CSI) just actuates tighten SCREW. See figure 32.

Note:

Do not turn the DRIVE SHAFT.

- 14.** Key in 2, 1 (BACK, TAKE) and check if CASSETTE SUCKER BAR is located on OPENER GAUGE as shown on figure 28. If necessary readjust SWITCH S11 (CSI).

- 15.** When CASSETTE SUCKER BAR is located on OPENER GAUGE as shown in figure 28 there should be a clearance of 2 mm between STOP SCREW and STOP 1.

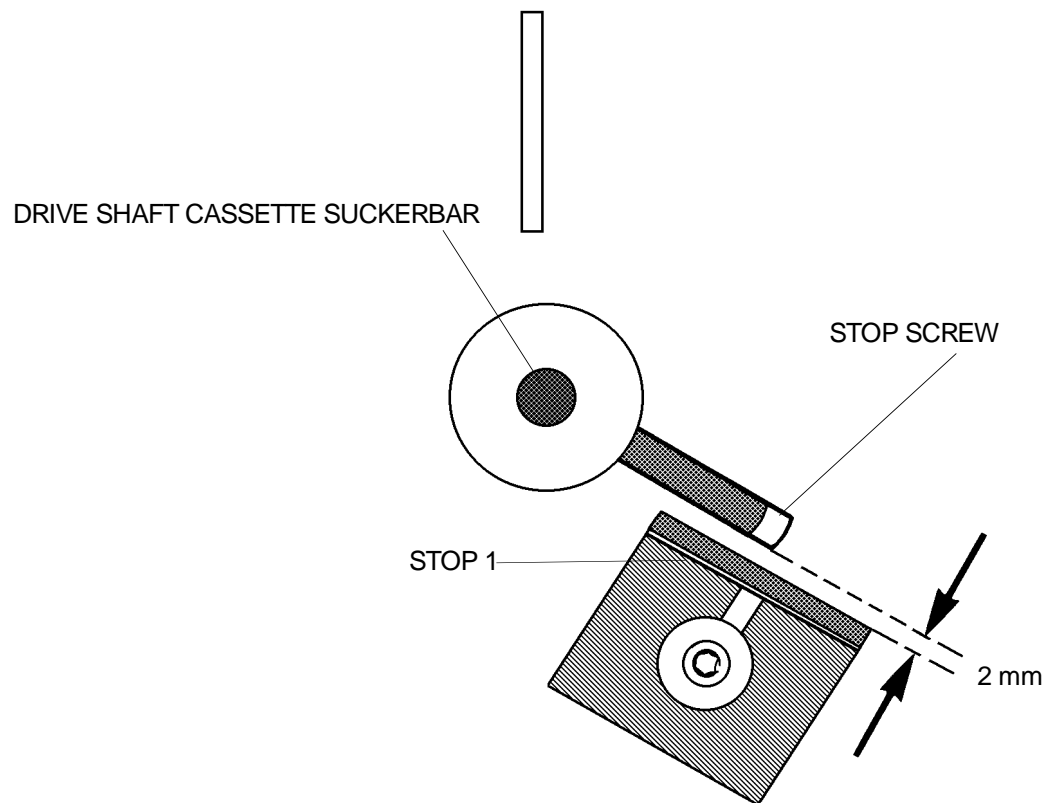


figure 33



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